

REMARKS

Claims 1, 2, 4, 8 to 11, 13 to 16, and 18 to 25 are pending in the application.¹

Claims 1 and 10 are independent. Favorable reconsideration and further examination are respectfully requested.

Initially, a substitute specification is being filed primarily to correct the errors in the translation. In particular, the phrase “Impedanzanpassung”² was incorrectly translated as “impedance adjustment”. As evidenced by the enclosed Google translation, the correct translation of “Impedanzanpassung” is impedance match. The substitute specification has made the necessary corrections, taking into account English grammatical rules.

Next, claim 6 was rejected under the first paragraph of §112 for allegedly failing to comply with the written description requirement. In particular, it was said that replacing “by means of an insulator” with “via a circulator” in the specification on line 20, page 3³ constitutes introduction of new matter into the application. However, as evidenced by the enclosed excerpt from dictionary.com, “by means of” is a definition of “via”.

Accordingly, replacement of “via” for “by means of” is clearly not new matter.

Furthermore, the original German text reads “Zirkulator”.⁴ As can be seen from the attached German-English dictionary Web page (dict.cc), the translation of Zirkulator is “circulator”. Accordingly, Applicants submit that the replacement of insulator with

¹ The Examiner is urged to independently confirm this recitation of the pending claims.

² See page 3, lines 24 to 33 of the German PCT application

³ Now, page 3, line 8 of the current substitute specification

⁴ See, e.g., page 3, line 6 and claim 6 of the German PCT application

circulator is not introduction of new matter, but rather a correction to the original English translation of the German PCT application.

Claim 6 has been cancelled; however, new claim 25 recites a circulator. Claim 25 is believed to comply fully with §112 for at least the reasons explained above.

Claim 7 was rejected under §112, second paragraph. However, claim 7 was cancelled, thereby rendering the rejection moot.

Turning to the art rejections, claims 1 and 8 were rejected over U.S. Patent No. 5,896,562 (Heinonen) in view of U.S. Patent No. 6,751,471 (Toda); claim 2 was rejected over Heinonen in view of Toda and U.S. Patent No. 6,643,522 (Young); claims 3 to 5, 15, 17 and 18 were rejected over Heinonen in view of Toda and U.S. patent 5,815,804 (Newell); claims 6, 7 and 16 were rejected over Heinonen, Toda, Young and Newell; claim 9 was rejected over Heinonen in view of Toda and U.S. Patent Publication No. 2003/0050018 (Weissman); claims 10 and 12 to 14 were rejected over Heinonen, Toda and Newell; and claim 11 was rejected over Heinonen, Toda, Newell, and Young. As shown above, Applicants have amended the claims. In view of these amendments, withdrawal of the art rejections is respectfully requested.

Amended independent claim 1 defines a circuit arrangement for use with a mobile telephone. The circuit arrangement comprises a transmitting circuit comprising a first signal line that corresponds to a first frequency band, a second signal line that corresponds to a second frequency band, a switch that connects an antenna to one of the first and second signal lines, a first amplifier in series with the first signal line, a second amplifier in

series with the second signal line, a first band-pass filter between the first amplifier and the switch, where the first band-pass filter has a frequency range that corresponds to the first frequency band, and a second band-pass filter between the second amplifier and the switch, where the second band-pass filter has a frequency range that corresponds to the second frequency band. The transmitting circuit also comprises a multi-layer ceramic module having integrated therein passive components for use in matching impedances between the switch and the first and second band-pass filters.

The applied art is not understood to disclose or to suggest the foregoing features of claim 1, particularly with respect to a multi-layer ceramic module having integrated therein passive components for use in matching impedances between the switch and the first and second band-pass filters.

In this regard, the Office action acknowledges that the Heinonen, Toda and Young fail to disclose passive components for adjusting impedance, and that these same references fail to disclose passive components comprising parts of a multi-layer module.⁵ Newell was cited to make up for the foregoing deficiencies. In particular, the Office Action cites to col. 2, lines 41 to 53 and col. 3, lines 49 to 60 for the proposition that transmission lines are used to adjust the impedance between a switch and a multi-layer module.⁶ The Office Action also cites those same parts of Newell for the proposition that passive components are incorporated into a multi-layer module.⁷ Later, referring to former

⁵ Office Action, page 8, referring to former claims 6 and 7

⁶ Office Action, page 8

⁷ Office Action, page 8

claim 13, the Office Action cites col. 4, lines 51 to 56, and col. 5, lines 46 to 56 for the proposition that passive components are incorporated into a multi-layer module.⁸

The cited portions of Newell are reproduced below.

Also shown in FIG. 2 is a second duplex pair 202'. The second duplex pair 202' includes a third transmit filter 204'. Filter 204' includes a third passband in the first frequency band and a third stopband in the second frequency band. Second duplex pair 202' also includes a fourth receive filter 206' which includes a fourth passband in the second frequency band and a fourth stopband in the first frequency band. The third filter 204' and fourth filter 206' together define a second duplex pair 202'. Filters 204' and 206' are connected by transmission lines 208' which act as duplex lines. Duplex lines are phase transmissions that present a substantially open circuit (high impedance) in the passband of the paired filter.⁹ (emphasis added)

Although one preferred embodiment requires a combination of a ceramic block filter, a SAW device and a multilayer ceramic, various construction techniques are contemplated by the present invention. The use of all SAWs, all ceramic monoblocks, all ceramic multilayer or any combination thereof are contemplated by the present invention for use in the dual band filter network. The only significant challenge involves guaranteeing that the high frequency of one band be duplexed with the low frequency of the other band. So long as this is achieved, the actual method of manufacturing the filter becomes dependent upon the specific filter design requirements.¹⁰

An advantage of having only one control switch is that there is less current drain, resulting in a longer battery life. Additionally, the switching means 510 may be an independent and discrete component, or it may be integrated directly into the multilayer package which houses at least one of the filters of the dual band filter network.¹¹

The dual band filter network of the present invention may also be designed using various filtering technologies. For example, the network could be manufactured using all monolithic blocks of ceramic, all filters in a single multilayer package or all filters using surface acoustic wave (SAW) technology. A functional network could also be designed using a combination of the technologies described above. In one embodiment, the first duplex pair (filters 204 and 206) are provided in a monolithic block of ceramic and a second duplex pair (filters 204' and 206') are also provided in a monolithic block of dielectric ceramic.¹²

⁸ Office Action, page 11

⁹ Col. 2, lines 41 to 53

¹⁰ Col. 3, lines 49 to 60

¹¹ Col 4, lines 51 to 56

¹² Col. 5, lines 46 to 56

Nowhere do the above excerpts disclose or suggest impedance matching, as claimed in the Office Action, much less passive components integrated into a multi-layer ceramic module to perform impedance matching between a switch and first and second band-pass filters. Granted, Newell, as shown above, does describe a ceramic multi-layer block that includes filters; however, claim 1 also requires passive components integrated into such a block for use in matching impedances between the switch and the first and second band-pass filters. The Office Action equates such passive components to transmission lines 208'. However, transmission lines 208' are not for impedance matching, but rather are used to "present a substantially open circuit (high impedance) in the passband of the paired filter", as highlighted above. In this regard, one of the advantages of the impedance matching provided by claim 1 is that it results in low signal/insertion loss (in addition to increased compactness). This is in direct contrast to transmission lines 208', whose implied purpose it is to prevent some signals from passing (i.e., to act as an open circuit).

The remaining art of record is not understood to disclose or to suggest anything that would remedy the foregoing deficiencies of Heinonen, Toda and Young and Newell vis-à-vis claim 1. Accordingly, claim 1 is believed to be allowable.

Amended independent claim 10 recites that the transmitting portion comprises a multi-layer ceramic module having a passive component integrated therein, and that the passive component is for use in matching impedances between a switch and a band-pass filter. As explained above with respect to claim 1, Heinonen, Toda and Young and Newell

are not understood to disclose or to suggest these features. Accordingly, claim 10 is also believed to be allowable.

Each of the dependent claims is also believed to define patentable features of the invention. Each dependent claim partakes of the novelty of its corresponding independent claim and, as such, has not been discussed specifically herein.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney can be reached at the address shown below. All telephone calls should be directed to the undersigned at 617-521-7896.

Please apply any fees or credits due in this case, which are not already covered by check, to Deposit Account 06-1050 referencing Attorney Docket No. 14219-073US1.

Applicants : Chrisitan Block, et al.
Serial No. : 10/519,172
Filed : January 17, 2006
Page : 15

Attorney's Docket No.: 14219-073US1
Client Ref.: P2002,0556USN

Respectfully submitted,

Date: September 6, 2007



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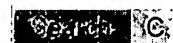
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circulating

circulating air

circulating air oven

circulating air switch

circulating assets

circulating capital

circulating capital

circulating heat recoverer

circulating memory

circulating oil

circulating oil

circulating oil

circulating oil lubrication

circulating pump

circulating pump

circulating pump

circulating pump

circulating pump

circulating register

circulating storage

circulation

circulation

circulation

circulation

circulation

circulation

circulation

circulation

circulation

circulation area

circulation figures

circulation limit

circulation of bank notes

circulation of bills

circulation of cash

circulation of money

circulation of water

German

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Umluft {f}

Umluftofen {m}

Umluftschalter {m}

Umlaufvermögen {n}

Umlaufvermögen {n}

Betriebskapital {n}

Rotationswärmerückgewinner {m}

Umlaufspeicher {m}

Umlaufschmieröl {n}

Umlauföl {n}

Umlaufschmierstoff {m}

Ölumlaufschmierung {f}

Umlaufpumpe {f}

Spülpumpe {f}

Zirkulationspumpe {f}

Umwälzanlage {f}

Umwälzpumpe {f}

Ringschieberegister {n}

Umlaufspeicher {m}

Umlauf {m}

Umwälzung {f}

Zirkulation {f}

Kreislauf {m}

Auflage {f} [von Zeitung]

Auflagenhöhe {f}

Durchblutung {f}

Blutkreislauf {m}

Verbreitung {f}

Verkehrsfläche {f}

Auflagenhöhe {f}

Umlaufgrenze {f}

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circulation period	Leihfrist {f}
circulation problems	Kreislaufprobleme {pl}
circulation statistics	Ausleihstatistik {f}
circulation term	Umlaufdauer {f}
circulator	Zirkulator {m} ←
circulator	Verbreiter {m}
circulator pump	Umlaufpumpe {f}
circulator pump	Zirkulationspumpe {f}
circulator pump	Umwälzpumpe {f}
circulator turbine	Antriebsturbine {f}
circulators	Verbreiter {pl}
circulatory	zirkulierend
circulatory	umlaufend
circulatory arrest	Kreislaufstillstand {m}
circulatory collapse	Kreislaufzusammenbruch {m}
circulatory disorders	Kreislaufstörungen {pl}
circulatory disturbance	Kreislaufstörung {f}
circulatory insufficiency	Kreislaufschwäche {f}
circulatory system	Kreislaufsystem {n}
circum-	um-, herum-
circum-Pacific {adj}	zirkumpazifisch
circumambient air	umgebende Luft {f}
circumambulation	Umkreisung {f}
circumbendibus	umständliche Ausdrucksweise {f}
circumbendibus	Umständlichkeiten {pl}
circumcenter [Am.]	Umkreismittelpunkt {m}
circumcentre [Br.]	Umkreismittelpunkt {m}
circumcircle	Umkreis {m}
circumcised	beschnitten
circumcised penis [Br.]	beschnittener Penis {m}
circumcises	beschneidet
circumcising	beschneidend
circumcision	Beschneidung {f}
circumcision	Vorhautbeschneidung {f}
circumcision	Zirkumzision {f}
Circumcision	Fest {n} der Beschneidung Christi
circumcisor	Beschneider {m}
circumcized penis [Am.]	beschnittener Penis {m}
circumcized [spv.]	beschnitten
circumcizes [spv.]	beschneidet
circumcizing [spv.]	beschneidend
circumfence	Kreisumfang {m}
circumference	Umfang {m}
circumference	Kreisumfang {m}
circumference of the earth	Erdumfang {m}

circumferences	Umfänge {pl}
circumferential	Umfangs-
circumferential	umlaufend
circumferential	den Umfang betreffend
circumferential angle	Umfangswinkel {m}
circumferential piston pump	Kreiskolbenpumpe {f}
circumferential register	Umfangsregister {n} [Druckmaschine]
circumferential register	Umfangregister {n} [Druckmaschine]
circumferential rib tread pattern	Längsrillenprofil {n}
circumferential slot	Ringnut {f}
circumferential speed	Umfangsgeschwindigkeit {f}
circumferential tread ribs	Profil {n} mit Längsrippen
circumfix	Zirkumfix {n}
circumfixation	Zirkumfigierung {f}
circumflex	Zirkumflex {m}
circumflex accent	Zirkumflex {m}

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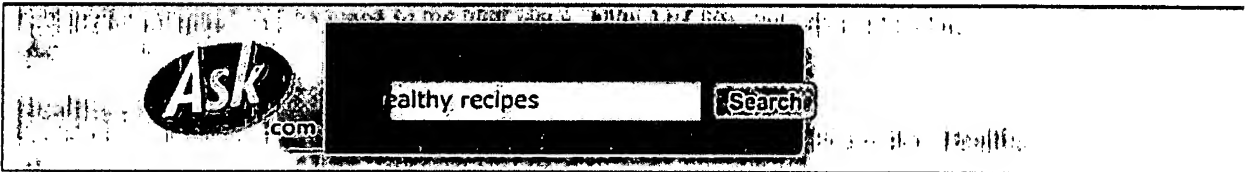
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vi·a   [vāh-yuh, vee-uh] [Pronunciation Key](#) - [Show IPA](#)
[Pronunciation](#)

—*preposition*

1. by a route that touches or passes through; by way of: *to fly to Japan via the North Pole.*
2. by the agency or instrumentality of: *a solution via an inquiry.*

—*noun*



3. *Architecture.* a space between two mutules.

[Origin: 1770–80; < L *viā*, abl. of *via* way]

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vi·a   (vī'ə, vē'ə) [Pronunciation Key](#)
prep.

1. By way of: *went to Pittsburgh via Philadelphia.*
2. By means of: *sent the letter via airmail.*

[Latin *viā*, ablative of *via*, *road*, see *wegh-* in Indo-European roots.]

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via (adv.)

1779, from L. *via* "by way of," ablative form of *via* "way, road, channel, course," of uncertain origin; not definitely connected with *vehere* "to carry convey."